

Polybrominated diphenyl ether (PBDE) flame retardants and human health.

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Polybrominated diphenyl ether (PBDE) flame retardants are a class of compounds used in a variety of consumer products to reduce the risk of injury and death from fires. PBDEs are not chemically bound to the materials in which they are used and can migrate out of products containing them. PBDEs have been found in food, indoor air, and household dust. Many PBDEs can build up in the body over time and are primarily stored in fat. Recent studies have shown that the levels of these compounds are increasing in human tissues and in the environment. There is concern that these increasing levels may be harmful to human health. Laboratory toxicity studies in rodents indicate that PBDEs affect the developing nervous system leading to impacts on behavior, learning and memory. Animal studies have also indicated that PBDEs alter thyroid hormone levels and reproductive organ development. This presentation will discuss health effects information including the toxicology of different PBDE congeners and human exposure pathways.